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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,272	12/23/2003	Joost Jeroen Ottens	081468-0306369	4455

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PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

YOUNG, CHRISTOPHER G

ART UNIT	PAPER NUMBER
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1756

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/20/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/743,272	Applicant(s) OTTENS ET AL.	
	Examiner Christopher G. Young	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 35-50 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-16, 18-23, 25-27 and 31-34 is/are allowed.
- 6) ☒ Claim(s) 1-5, 17, 24 and 28-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2 sheets</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-34 in the reply filed on November 3, 2006 is acknowledged.
2. Claims 35-50 stand withdrawn as being part of the non-elected invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Publication Number 04192317 (Nei Masahiro).

A careful review of the abstract and constitution of the foreign document clearly shows the claimed embodiments of 1-3 and 28-30, that being a method of correcting thermally-induced field deformations of a lithographically exposed substrate, comprising: exposing a pattern onto a plurality of fields of a substrate in accordance with pre-specified exposure information; measuring attributes of said fields to assess deformation of said fields induced by thermal effects of said exposing; determining corrective information based on said measured attributes; and adjusting said pre-

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specified exposure information, based on said corrective information, to compensate for the thermally-induced field deformations.

5. Claims 1-5, 17 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0877297.

A careful review of the foreign document clearly shows the claimed embodiments of 1-5, 17 and 28-30, that being a method of correcting thermally-induced field deformations of a lithographically exposed substrate, comprising: exposing a pattern onto a plurality of fields of a substrate in accordance with pre-specified exposure information; measuring attributes of said fields to assess deformation of said fields induced by thermal effects of said exposing; determining corrective information based on said measured attributes; and adjusting said pre-specified exposure information, based on said corrective information, to compensate for the thermally-induced field deformations. See specifically the Abstract on the first page, and the claims on page 8.

6. Claims 1-5, 17, 24 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Okino et al., US Patent Number 6,447,964.

A careful review of the patent clearly shows the claimed embodiments of 1-5, 17, 24 and 28-30, that being a method of correcting thermally-induced field deformations of a lithographically exposed substrate, comprising: exposing a pattern onto a plurality of fields of a substrate in accordance with pre-specified exposure information; measuring attributes of said fields to assess deformation of said fields induced by thermal effects of

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said exposing; determining corrective information based on said measured attributes; and adjusting said pre-specified exposure information, based on said corrective information, to compensate for the thermally-induced field deformations.

Methods are disclosed in the patent for reducing effects of thermal expansion of a sensitive substrate arising during microlithographic exposure of the substrate using a charged particle beam. Thermal expansion ordinarily causes lateral shift of exposure position of dies (chips) on the substrate which tends to reduce the positional accuracy with which images of the dies are formed on the substrate. Generally, regions of the substrate where entire dies are formed are exposed first, followed by regions (especially peripheral regions) exposed with only portions of dies. Refer particularly to the Abstract and claims 1-16.

Allowable Subject Matter

7. Claims 6-16, 18-23, 25-27 and 31-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Young whose telephone number is 571-272-1394. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christopher G. Young
Primary Examiner
Art Unit 1756

cgy